

WATER CUT METER FOR MEASUREMENT OF WATER IN CRUDE OIL

ABSTRACT OF THE DISCLOSURE

5 An apparatus, systems, and methods for measuring an amount of oil in a flow of fluid
are provided. A housing defines an interior passage configured to pass a flow of fluid. A
capacitance sensor, which suitably is a pair of insulated electrodes, is configured to respond
to a capacitance of the flow of fluid is disposed within the interior passage of the housing.
The capacitance sensor is coupled to conductors through which a first analog signal is
10 generated. These conductors can be engaged to measure the capacitance of the flow of fluid.
A conductance sensor configured to measure conductance of the flow of fluid also is
disposed on the interior passage of the housing and generates a conductance signal as a
second analog signal. The first and second analog signals can be used to assess the relative
percentages of oil and water in the flow of fluid.

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